

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(10) International Publication Number
WO 2005/115981 A3

(43) International Publication Date
8 December 2005 (08.12.2005)

PCT

(51) International Patent Classification⁷: C07D 209/88,
405/12

(21) International Application Number:
PCT/IN2005/000139

(22) International Filing Date: 3 May 2005 (03.05.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
479/MUM/2004 7 May 2004 (07.05.2004) IN

(71) Applicant (for all designated States except US): USV
LIMITED [IN/IN]; BSD Marg, Govandi, Mumbai 400
088, Maharashtra (IN).

(72) Inventors; and

(75) Inventors/Applicants (for US only): TARUR, Venkatasubramanian, Radhakrishnan [IN/IN]; A-301, Vaishali Towers, B.R. Road, Mulund (West), Mumbai 400 080, Maharashtra (IN). SATHE, Dhananjay, Govind [IN/IN]; H-15, Rajdeep CHS, Gokhale Road, Naupada, Thane 400 602, Maharashtra (IN). KULKARNI, Swapnil, Jayant [IN/IN]; 201, Ram Janaki Co Hsg Soc, Chittaranjan Das Road, Ram Nagar, Dombivli (E), Thane 421 201, Maharashtra (IN).

(74) Agent: NAIR, Gopakumar, G.; Patent & Trademark Agent (Regd.), Gopakumar Nair Associates, Nair Baug, Akuli Road, Kandivli (East), Mumbai 400 101 Maharashtra (IN).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

(54) Title: A PROCESS FOR THE PREPARATION OF 1-(9H-CARBAZOL-4-YLOXY)-3-2-(METHOXYPHENOXY)-ETHYL AMINO-PROPAN-2-OL

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

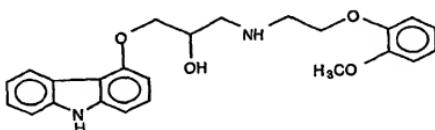
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(U)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(U)) for all designations of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 19 January 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



(I)

WO 2005/115981 A3

(57) Abstract: The present invention discloses a novel process for preparation of carvedilol by using eco friendly solvents to obtain the said carvedilol in high purity. The said process comprises, reacting 4-hydroxy carbazole of formula (IV) with epichlorohydrin in presence of an organic solvent and a base at temperatures between 10°C - 30°C; further reacting the resultant 4-(2,3-epoxypropoxy)-carbazole of formula (II) with a salt of 2-(2-methoxyphenoxy) ethylamine of formula (III), preferably hydrochloride salt in presence of a base and a hydroxylc solvent at temperatures between 30°C - 90°C.